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ABSTRACT

In the spring of 1971 a study was conducted at various religious student centers at the University of Texas at Austin to determine the effectiveness of a multimedia presentation in several worship services. Effectiveness was defined as: 1) acceptance of the quality of the presentation by a distinct group of viewers; and 2) their recognition of cognitive challenges presented by the show. A multimedia presentation based on excerpts from the rock opera Jesus Christ Superstar was presented during a one-month period around the Easter celebration. The results showed that: 1) the particular congregations chosen did prove distinct in terms of orthodoxy; 2) the hypothesis that unorthodox worshippers would be more positively responsive to this multimedia presentation than would orthodox worshippers was not statistically confirmed; and 3) orthodoxy group and test group scores on the Superstar evaluation factors indicate that the presentation was effective since it was qualitatively lauded by all groups and received best by the more unorthodox Protestants. (HAB)

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WORSHIP AND MULTIMEDIA

A Study by Ken Burke

August 1973

Throughout the 1960's, the use of electronic media presentations which used multiple images and/or simultaneous sensory messages (the sight and sound combinations which have come to be known as multimedia shows) found a place in such diverse activities as rock music dances and concerts, theatre productions, ballets, operas, art galleries, college lectures, and worship services. Much reporting was done on the entertainment aspects and educational possibilities of multimedia, with coverage ranging from scholarly journals to underground newspapers.

Educational studies alone were encouragingly extensive. Roberts and Crawford (1964) enumerated and justified several advantages of multi-image presentations for both information transmission and audience rapport. Experiments and reports on the educational effectiveness of multichannel presentations were frequent and revealing; probably the most recurrant idea was some form of the "cue summation" theory which probed the use of redundancy and relevant cues summated across sensory channels. From early endorsements by Hartman (1961) through a steady development to the present (Travers and Van Mondfrans 1964, Anderson 1966, Briggs 1967, Smith 1967, Severin 1967, Anderson 1968, Hsia 1971), there have been basic agreements among many researchers on the effectiveness of non-redundant multi-channel information transfer. The only significant re-interpretation of cue summation comes from Conway (1967, 1968), but his substitution of sign types for previous ideas about channels does not detract from the basic praise given to multichannel information presentation.

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Multimedia in business, government, and industry, as well as multimedia entertainment, have all been well reported (Renan 1967, Youngblood 1970, Burke 1972). Yet research in these fields has been quite meager. To this author's knowledge, multimedia theory in business, entertainment, and art circumstances has been based on subjective decisions by creators or on inferred knowledge from the educational studies. While it is true that non-academic forms of multimedia are also involved with information transfer, the means and procedures of business or art hardly seem analogous to educational purposes and methods. Thus, it would seem most welcome to a student of multimedia to find research studies aimed at non-academic uses of this art/communication form. At present such studies are quite rare.

Similarly, researched knowledge on the proper use of multimedia in religious worship services is virtually non-existant,[1] even though this new worship element has been used rather frequently since the early 1960's. Possibly little has been said in print about this phenomenon because multimedia worship does not seem to have developed past the novelty stage. The few documentations this author has seen concern quite sophisticated celebrations (Sheppard 1967, Bloy 1969), but a large amount of cross-country interviews and encounters has revealed little beyond the most rudimentary use of slides and audio tape. Orbin Klapp's Collective Search for Identity (1969) examined the human need for cult and ritual, plus the dearth of meaningful ritual in our contemporary society; yet his advice that "experiments are needed to determine which form of ritual works, using controls and making comparisons by pretests and posttests" (p.136) still appears to have gone unheeded.

Consequently, in the spring of 1971 a study was conducted at various religious student centers at the University of Texas at Austin to determine the effectiveness of a multimedia presentation in several worship services. Effect-

iveness was defined as: (1) acceptance of the quality of the presentation by a distinct group of viewers, (2) their recognition of cogritive challenges presented by the show. A distinct group of viewers was to be measured in terms of degree of Christian orthodoxy (Rosten 1963) rather than in terms of congregational affiliation; interviews with several clergymen convinced us that any congregation would contain a wide variety of opinions regarding orthodoxy.

THE EXPERIMENT

A multimedia presentation based on exerpts from the rock opera Jesus Christ Superstar was prepared, using two Carousel slide projectors, four 140-capacity slide trays, one Super 8mm film projector, and a stereo soundtrack on reel-to-reel audio tape. This was a two-screen, fifteen-minute show designed to be slightly unorthodox in content, particularly in its treatment of the Easter theology about Jesus Christ. While the music came solely from the original recording of the rock opera, the visuals had no relation to subsequent theatrical stagings of Jesus Christ Superstar. Rather, the images were a combination of religious paintings, photos of students, and objects from the local environment, supplemented by quotes from the New Testament.

For the purposes of this experiment, religious orthodoxy was based on generally accepted precepts of the Christian faith (Rosten 1963). In that the show was presented during a one-month period around the actual celebration of Easter, it was presumed by the author to be an unconventional, unexpected look at the Easter story at a time when interest in the subject would be naturally high. No one who saw this presentation was expected to be familiar with the music, but it was quite popular in the area and had been the subject of discussion at several local churches at that time.[2]

The congregations who were tested on this multimedia presentation were chosen from religious student centers since these were familiar to the researcher and because they came from a relatively stable, homogenious social and intellectual environment. Two factors determinted the final choice of particular student congregations: (1) previous exposure to multimedia in the context of worship within the preceeding six months so the emotional effects of novelty would be reduced, (2) congregations predicted by the researcher to be distinct from each other in degrees of religious orthodoxy. Religious orthodoxy was measured by a pretest to be described below.

In the Superstar experiment the congregations chosen to participate were from the Methodist Student Center, the Lutheran Student Center, the Catholic Student Center, and the Baptist Student Center. Based on personal knowledge of the situation and interviews with the ministers involved, we believed that the Methodists would be the least orthodox of the above groups,[3] followed in order of increasing orthodoxy by the Lutherans, Catholics, and Baptists. The show was also presented to a graduate communications research seminar and to a University-accredited Bible class held at the Baptist Student Center in order to gain some reaction from groups of students in non-worship situations for purposes of comparison. No predictions were made as to the orthodoxy rankings of these classes. Congregations saw this presentation in the context of a regular weekly worship service; classes were tested during normal class periods at their accustomed locations.

Since the Superstar presentation was unorthodox in its religious content, it was hypothesized that a religiously unorthodox person would respond more positively to this multimedia show than would a religiously orthodox person. Orthodoxy was measured with a pretest attitude survey questionnaire.[4] By their respon-

ses to the pretest, subjects assigned themselves to one of four orthodoxy groups: orthodox (O), slightly orthodox (SO), neutral (N), and slightly unorthodox (SU). Three other possibilities existed---very orthodox, unorthodox, and very unorthodox---but no Ss rated these classifications. All assignments to orthodoxy groups (Table I) were based on a scale of equal intervals that matched one of the seven group possibilities with a given total score on the pretest.

Following the presentation, each S was given a posttest which contained three groups of semantic differential scales. The first group measured reactions to the multimedia presentation, the second group tested theological ideas about Jesus (as a check on the validity of the pretests), and the third group of scales measured attitudes about the role of the Church in contemporary society.[5] This "Church" data was merely of interest, not directly related to the experiment; due to some scoring errors on the "Church" scales, no further mention will be made of them. Factor analysis of the posttest scales showed the Superstar evaluation with three factors and the "Jesus Divinity" scales with two factors. Orthodoxy group scores on these factors were used to check the validity of the hypothesis. Analysis of variance checked the validity of the posttest scores. Attempts to correlate individual S's orthodoxy ratings with their posttest evaluations proved too inconsistant to consider. Consequently, the results described below must be attributed to orthodoxy groups as wholes, not to specific individuals in these groups.

RESULTS

(1) Congregations were properly predicted in terms of religious orthodoxy. On a 1-7 scale, with 1 indicating the most orthodox position, the testing groups ranked as follows: Methodists (4.0), research class (3.7), Lutherans (3.4), Catholics (3.1), religion class (3.0), and Baptists (2.9).

(2) Scores on the "Jesus Divinity" scales support the composition of the orthodoxy groups (Table I). Further, scores on these scales proved significant well beyond the .001 level (Table II).

(3) The orthodoxy groups gave Superstar evaluations which were quite consistant with the hypothesis. Of the four groups, the SU's gave the highest rating to all three Superstar factors (Table I) with the O's recording substantially lower scores, and the other two groups responding as predicted. However, these results can be considered only a trend in favor of the hypothesis because analysis of variance failed to show significance below the .20 level for factors 1 and 2, and the .10 level for factor 3. As was noted before, there was frequent inconsistency of response to the presentation within each orthodoxy group, even though the group means followed the hypothesis. The researcher cannot explain this intragroup discrepancy in any other terms than individualistic interpretation of group mores.

(4) Whether scored in terms of orthodoxy groups or congregations, Ss were positive in their responses to the presentation, while the factors measuring cognitive value and technical competence received consistantly high scores.

(5) Of all the Superstar evaluation scales, the one receiving the highest numerical score was "good", indicating a positive emotional response to the show.

(6) There were no significant differences in responses according to the sex of the 108 scored Ss — 70 of whom were male, 38 female. Since most Ss were students in the 18-25 age bracket, there were no significant differences according to age or occupation.

Table I

Means Scores by Orthodoxy
1 indicates highest positive

Groups		Superstar			Jesus	
Name of Group	No. of Ss	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2
GroupI....SU	5	1.68	2.10	1.90	2.75	3.33
GroupII...N	24	2.09	2.81	2.31	3.21	3.28
GroupIII..SO	47	2.45	2.93	2.88	1.65	2.18
GroupIV...O	32	2.38	3.31	2.61	1.40	1.59

Table II

Analysis of Variance

Superstar Evaluation:

none of the scores on the Superstar factors were significant at the .01 level or lower

Divinity of Jesus

(A) factor 1	source	sum of squares	df	ms	f
	between	52.00	2	26.00	18.48
	within	141.33	100	1.41	
	total	193.33			

(A) factor 2	source	sum of squares	df	ms	f
	between	39.63	2	19.82	23.60
	within	84.28	100	.84	
	total	123.91			

SIGNIFICANT FINDINGS WITHIN TEST GROUPS

Detailed analysis of each test group would be too lengthly and inconsequential for the purposes of this article. Still, some points should be noted. The research class scored highest on Superstar factor 3 (technical qualities) and lowest on Superstar factor 1 (aesthetic and intellectual value). Factor 3 responses seem rather obvious given the orientation of the class; factor 1 responses seem explicable only in terms of this group's religious neutrality. Thus, the cognitive response of this group seems consistent with the initial discussion of the twofold aspects of effectiveness: quality and content. For this class, the presentation should not be expected to be totally effective once their religious neutrality was determined. Similarly, the Lutherans ranked highest on Superstar factors 1 and 2, an understandable response since the show was intended for slightly unorthodox Christians. The Baptists did not score as high as the more liberal Protestants, another predicted result. From the rankings noted above, it should be clear that the show was effective, at least in terms of the researcher's intended results.

Catholics ranked most orthodox on both Jesus factors, followed closely by the Baptists and the religion class (a combination of various Protestants). The Baptist minister rated a solid O status, but the Methodist and Lutheran ministers followed their more liberal congregations by ranking as SU and N respectively.

SUMMARY

From the results obtained, three conclusions seem evident: (1) the particular congregations chosen did prove distinct in terms of orthodoxy; (2) the hypothesis that unorthodox worshippers would be more positively responsive to this multimedia presentation than would orthodox worshippers was not

statistically confirmed since there was much inconsistancy of response within each group— there was, however, a recognizable trend in favor of the hypothesis; (3) orthodoxy group and test group scores on the Superstar evaluation factors indicate that the presentation was effective since it was qualitatively lauded by all groups and received best by the more unorthodox Protestants, who were the intended primary audience. The one question that remains concerning effectiveness is the problem of all test groups reacting so positively to the presentation, even though it should have seemed slightly offensive to some of them. This last problem must be discussed further.

DISCUSSION

Since the author is satisfied that the Superstar presentation was effective in its intended terms, there should be reason to recommend further use of religious multimedia as long as the theological leanings of a congregation can be ascertained in order to tailor a presentation for acceptance. Still, there is the question of why all groups tested had such positive reactions to the presentation. Could this indicate that entertainment value overrode cognitive objections in the more orthodox groups? Perhaps, but a more sophisticated explanation could be offered by referring to a distraction study by Festinger and Maccoby (1964).

To further examine earlier research in the effects of distraction on persuasive communications, Festinger and Maccoby used two versions of a filmed argument against college fraternities. One group of fraternity men saw the first film— a straight narrative with a commentator— and soundly rejected the message. Another group of fraternity men saw the second version— in which the soundtrack remained the same but the visual consisted of abstract color images—and were significantly less opposed to the film's message than the first group had been. Festinger and Maccoby claim this proves their distraction theory, that a person who is distracted when receiving an objectionable message is not able to muster

proper defenses against that message.

This researcher feels that a somewhat similar result occured in the orthodox congregations' acceptance of the Superstar presentation. Even though the soundtrack carried messages to these congregations that would fit Festinger's 1957 theory of cognitive dissonance, the images were photographically striking and colorful and could conceiveably be considered a distraction from the message of the soundtrack. For the less orthodox groups, who were more in agreement with the message of the soundtrack, the visuals may also have been distracting, but these groups had less dissonance to overcome. Thus, it could be said that the presentation was well received by all groups because the unorthodox groups were in agreement with it and the orthodox groups were temporarily disarmed by it. If such were the case, then it could be concluded that a well-planned multimedia presentation would be effective for all types of congregations, since dissenters, as well as supporters, would be charmed by technical competance. This may be true, but in terms of being cognitively effective, the presentation still stands to impart more positively-received information to groups that are prepared to accept the content of the show. It should be remembered that the more orthodox groups still scored very positive responses to Christian theology after the Superstar presentation as well as before, indicating that their theology was unshaken even if their objections were minimized. To continue showing unorthodox presentations to such orthodox groups would amount to pure entertainment; such fiscal extravagance would hardly be a welcome suggestion.

Of course even with congregations who are primed to accept the content of a multimedia show (or a film or even a weighty sermon), attitude change or broadening of concepts is too complex a process to assign to any single presentation, no matter how much of a technical gem it is. But one effective show could be the first step in opening minds for a series of concentrated educational efforts,

augmented by electronic or print media in a classroom-type manner. The basis for any such efforts would seem to be knowledge of a congregation's theological leanings. Once such information was determined by attitudinal surveys, the content of future presentations could be more easily directed to given congregations.

This study constitutes too little research to be authoritative, and it seems hard to replicate for this researcher. Hopefully, there will be enough ministers interested in this approach to effective worship situations so that some will have access to testable congregations. The results of this study will hopefully be verified by such future tests, but even now the trends should be clear enough to provide production guidelines for religious multimedia shows. First, the theological persuasions of the congregation should be determined by some accurate means; then a well-designed, thought-provoking presentation geared to a specific congregation can be planned. Certainly such people as media specialists, communications producers, and information-transmission researchers should be consulted if possible. Reference to any number of research articles, audiovisual texts, and multimedia histories would also be useful in constructing a viable multimedia presentation. Finally, the result should be measured—— by interview at least—— to gain some feeling of how effective and stimulating the presentation was. Considering the economic limitations of a well-realized multimedia show, any less serious use of this communication tool would reduce the presentation to mere showmanship. Expansion of cognitive awareness, rather than sensory immersion, should be the goal of multimedia worhip services.

Footnotes

The author is a graduate of the University of Texas at Austin where his M.A. thesis dealt with the history of electronic multimedia; currently he is employed as the Multimedia Coordinator of Queens College (C.U.N.Y.). Grateful recognition is offered by the author to Drs. Joseph Dominick and Thomas Steinfatt, both of Queens College, for their assistance with this article.

[1]The only related study found by the author is by Parker (1955). Even this was only a test of teaching effectiveness using the film The Story of Jesus with 4th-6th graders in New Haven, Conn. Results showed "little correlation between theology and teaching" (p.59), and the ministers involved agreed that films were better for conveying information than for securing "Christian committment" (p.65). Also of interest to this subject area is Kuhns' The Electronic Gospel; however, Kuhns emphasizes theory and rationale for using experimental forms of worship while neglecting documentation and evaluation of what is already happening.

[2]Some viewers commented to the author that the presentation was not really so unorthodox, but most criticism of this type came from people who admitted quite unorthodox or even indifferent religious views. Several people who considered themselves religiously orthodox were interviewed after the presentation and found it to be definitely unconventional.

[3]Of interest to this study are the tests reported by Demerath and Lutterman (1969) of religious student groups at the University of Wisconsin at Madison. These extensive experiments showed that particular denominations would consistantly rank in the same of five basic groups when questioned on any social, religious, or political issue. As might be expected, the five groups were labeled Jewish, Liberal Protestant, Moderate Protestant, Conservative Protestant, and Catholic. For this author's experiment some thought was given to chosing a congregation that would

be predicted to fall into one of the five Wisconsin groups; even so, particular denominations could not always be correlated. For example, the Methodist student congregation in Austin is considered much more liberal than other Austin student centers, yet the Madison Methodists proved to be rather conservative on the Demerath and Lutterman tests. Another result of the Wisconsin studies was that Jews do not score significantly on Christian-oriented tests; this fact, and the abscence of electronic media at the Hillel services in Austin, led the researcher to not test at Austin Hillel.

[4]The pretest was adapted from the Scriptural Literalism Scale developed by Dr. James S. Hogg (Stanford) and Dr. Thomas Friedman (University of Texas). After completion, the questionnaire was closely compared to similar scales in Measures of Social Psychological Attitudes (Robinson and Shaver, 1969) as a final test for validity.

[5]Three sources served as inputs for the Superstar evaluation scales: (1) responses to a multimedia presentation at the University of Texas Catholic Student Center on March 7, 1971; (2) a semantic differential compiled by Dr. Robert Brooks and Brian Robertson from a large communications lecture class at the University of Texas, October 1970, to evaluate another multimedia show presented by this author; (3) Roget's Thesaurus. The "Jesus Divinity" scales were constructed with the aid of Drs. R. Brooks and J. L. Whitehead of the University of Texas in March 1971. Dr. J. L. Whitehead also helped with the formation of the "Church" scales in March 1971, using Thurstone's 1929 church scales and Roget's Thesaurus.

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